AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer claims indicated as cancelled. The following Listing of Claims is intended to replace all prior versions and/or listings of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A hybrid module comprising:
an electro-optical component for transmitting or receiving energy;
an electronic component for amplifying and transferring an electric signal to said electro-optical component;
a planar light wave circuit formed of a glass layer for providing an opto-electronic signal communication path; and
an optical waveguide embedded in and integrally formed with said glass layer forming said planar light wave circuit for propagating said opto-electronic signal communication, ~~communication.~~
wherein the hybrid module is a glass-based packageless non-PCB module;
wherein the optical waveguide is a glass-based mono-layer optical waveguide formed of a single layer of a single uncoated non-etched material;
wherein a first edge of the optical waveguide, located in proximity to the electro-optical component, is tapered to improve the connection between the optical waveguide and the electro-optical component, and a second edge of the optical waveguide is non-tapered;
wherein the hybrid module further comprises an optical fiber connector for direct connection to an external optical fiber, wherein the optical fiber connector is polished at an angle;
wherein the electro-optical component and the electronic component are enclosed in a heat sink encapsulation to dissipate heat.

2. **(Previously Presented)** A hybrid module as in claim 1, further comprising an optical fiber plug connector.

3. **(Previously Presented)** A hybrid module as in claim 1, further comprising an embedded folding micro-mirror embedded in said planar light wave circuit for directing energy transfer between said electro-optical component and said optical waveguide.

4. **(Canceled)**

5. **(Canceled)**

6. **(Currently Amended)** A hybrid module as in claim [[5,]] 1, wherein said heat sink encapsulation comprises a metal cap.

7. **(Currently Amended)** A hybrid module as in claim [[5,]] 1, wherein said electro-optical component is coupled to said electronic component.

8. **(Currently Amended)** A hybrid module as in claim 3, wherein said electro-optical component is coupled to said waveguide through said embedded folding micro-mirror.

9. **(Currently Amended)** A hybrid module as in claim [[5,]] 1, wherein said electro-optical component comprises a current amplifier for amplifying weak signals.

10. **(Currently Amended)** A method comprising:

fabricating a ~~glass~~ waveguide glass wafer; ~~support;~~

producing a support glass wafer;

creating ~~an optical chip~~ optical chips by attaching said support glass wafer to said ~~glass~~ waveguide glass wafer; ~~support;~~ and

creating an electro-optical modules wafer by attaching electro-optical components to said ~~glass~~ waveguide glass wafer, ~~support of said optical chip,~~

wherein the created electro-optical modules wafer comprises at least one electro-optical module which is a glass-based packageless non-PCB module comprising:

wherein the optical waveguide is a glass-based mono-layer optical waveguide formed of a single layer of a single uncoated non-etched material;

wherein a first edge of the optical waveguide, located in proximity to the electro-optical component, is tapered to improve the connection between the optical waveguide and the electro-optical component, and a second edge of the optical waveguide is non-tapered;

wherein the hybrid module further comprises an optical fiber connector for direct connection to an external optical fiber, wherein the optical fiber connector is polished at an angle;

wherein the electro-optical component and the electronic component are enclosed in a heat sink encapsulation to dissipate heat.

11. **(Currently Amended)** A method as in claim 10, wherein said fabricating said ~~glass~~ waveguide glass wafer ~~support~~ further comprises:

creating a plurality of waveguides using ion exchange technology in said waveguide glass wafer forming a planar lightwave circuit; ~~glass layer;~~

printing electric lines and contacts on said waveguide glass wafer; ~~planar lightwave circuit glass layer;~~

dicing a slot in said waveguide glass wafer; ~~planar lightwave circuit glass layer;~~ and

filling said slot in said waveguide glass wafer ~~planar lightwave circuit glass layer~~ with a light-reflecting metal forming a micro-mirror.

12. **(Currently Amended)** A method as in claim 10, wherein said producing said ~~glass~~ support glass wafer further comprises:

creating a plurality of vias on a glass substrate; coating said vias with a conductive material; and

printing electrical lines and contacts on both sides of said support glass wafer. ~~substrate.~~

13. **(Currently Amended)** A method as in claim 12, wherein said creating said plurality of vias ~~are created~~ comprises creating by wet or dry etching.

14. **(Currently Amended)** A method as in claim 11, wherein said creating said optical chip further comprises:

dicing said ~~waveguide glass support~~ electro-optical modules wafer at one side to be connected to create double bars;
polishing said fiber optic connector side; and
attaching pig-tail fibers at an end of each of said plurality of waveguides.

15. **(Previously Presented)** A method as in claim 10, wherein said electro-optical components are attached to said optical chip using an active alignment beam.

16. **(Previously Presented)** A method as in claim 14, wherein said creating said electro-optical module further comprises:
encapsulating said electro-optical components and electronic components with a thermal conductive polymer; and
dicing said double bars to create said separate electro-optical modules.

17. **(Currently Amended)** A hybrid module as in claim 1, wherein said electro-optical component is ~~directly~~ mounted on said glass layer forming said planar light wave circuit.

18. **(Currently Amended)** A hybrid module as in claim 1, wherein said at least one optical waveguide is formed as a region of ion exchange within ~~said glass~~ a waveguide glass wafer. ~~support.~~